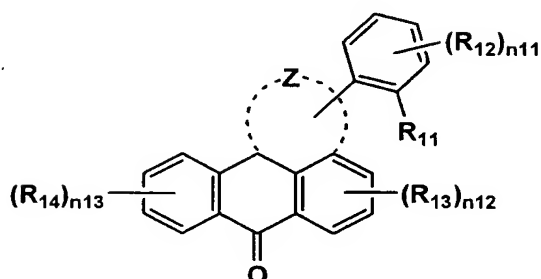


What is claimed is:

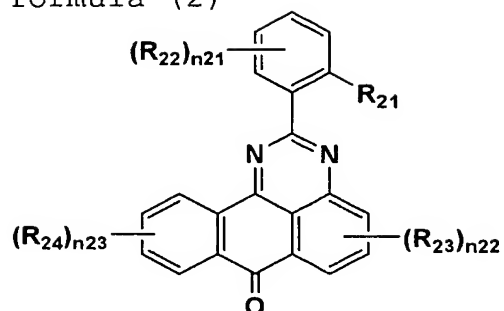
1. A dye represented by the following formula (1):
formula (1)



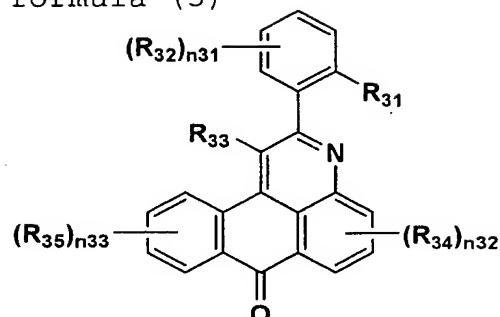
wherein Z is an atomic group necessary to form a 6-membered nitrogen containing aromatic ring; R₁₁ is a hydrogen bonding group; R₁₂, R₁₃ and R₁₄ are independently a hydrogen atom or a substituent; n₁₁ and n₁₃ are each an integer of 1 to 4; n₁₂ is an integer of 1 to 3.

2. The dye of claim 1, wherein the dye represented by formula (1) is a dye represented by the following formula (2), (3), (4), (5), (6) or (7):

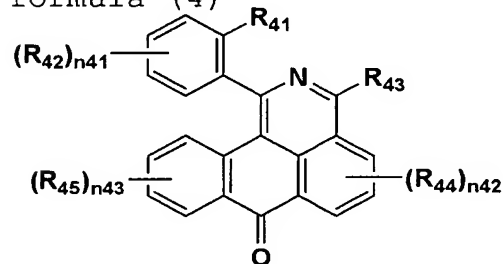
formula (2)



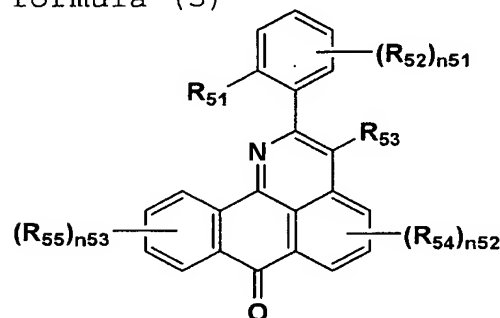
formula (3)



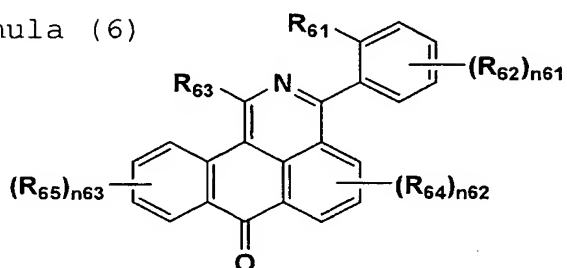
formula (4)



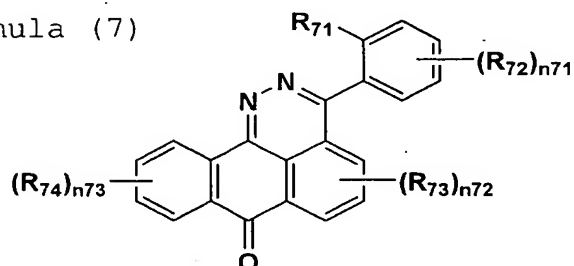
formula (5)



formula (6)



formula (7)



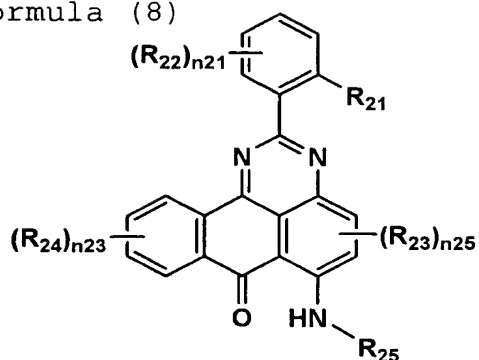
wherein R_{21} , R_{31} , R_{41} , R_{51} , R_{61} and R_{71} are each a hydrogen bonding atom; R_{22} , R_{23} , R_{24} , R_{32} , R_{33} , R_{34} , R_{35} , R_{42} , R_{43} , R_{44} , R_{45} ,

R₅₂, R₅₃, R₅₄, R₅₅, R₆₂, R₆₃, R₆₄, R₆₅, R₇₂, R₇₃, and R₇₄ are independently a hydrogen atom or a substituent; n₂₁, n₂₃, n₃₁, n₃₃, n₄₁, n₄₃, n₅₁, n₅₃, n₆₁, n₆₃, n₇₁ and n₇₃ are each an integer of 1 to 4; n₂₂, n₃₂, n₄₂, n₅₂, n₆₂ and n₇₂ are each an integer of 1 to 3.

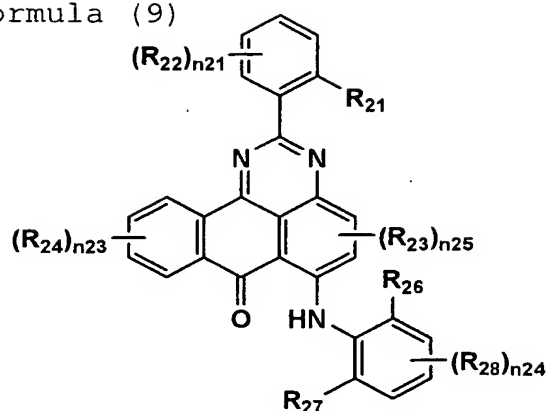
3. The dye of claim 2, wherein the dye represented by formula (1) is a dye represented by formula (2) or (3).

4. The dye of claim 3, wherein the dye represented by formula (2) is a dye represented by the following formulas (8) or (9), and the dye represented by formula (3) is a dye represented by the following formulas (10) or (11):

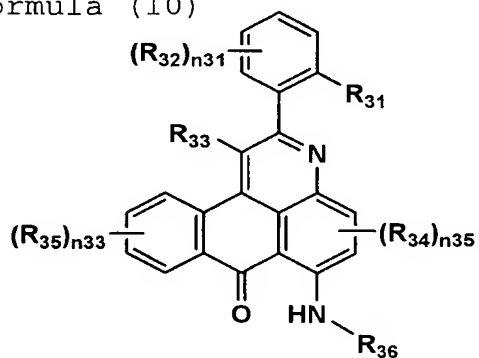
formula (8)



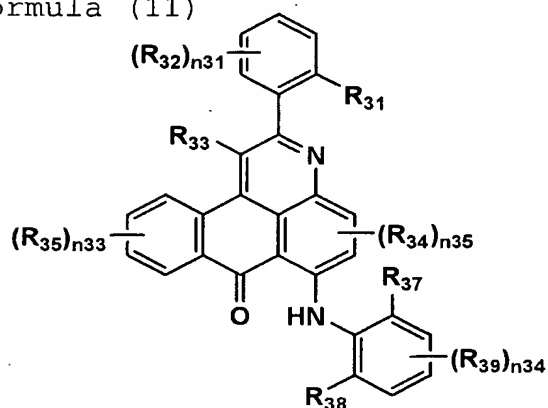
formula (9)



formula (10)



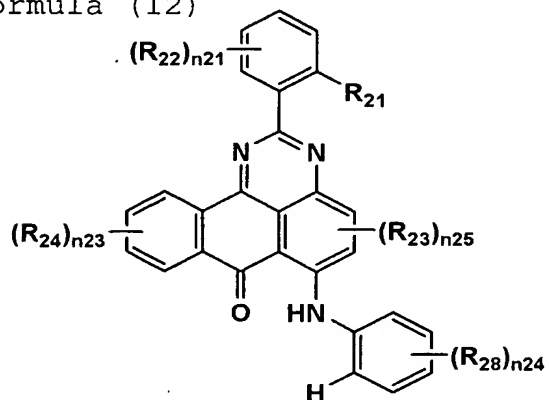
formula (11)



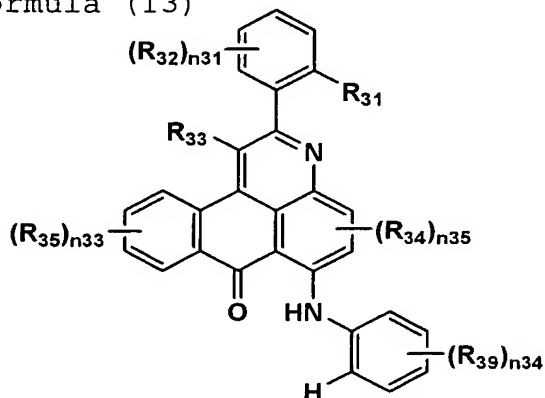
wherein R₂₁ and R₃₁ are independently a hydrogen bonding group; R₂₂, R₂₃, R₂₄, R₂₈, R₃₂, R₃₃, R₃₄, R₃₅ and R₃₉ are independently a hydrogen atom or a substituent; R₂₆, R₂₇, R₃₇ and R₃₈ are independently a substituent; n₂₁, n₂₃, n₃₁, and n₃₃ are each an integer of 1 to 4; n₂₄ and n₃₄ are each an integer of 1 to 3; n₂₅ and n₃₅ are each an integer of 1 or 2; R₂₅ and R₃₆ are independently a group having a Hammett substituent constant (σ_p) of 0.3 to 1.0.

5. The dye of claim 3, wherein the dye represented by formula (2) is a dye represented by the following formula (12), and the dye represented by formula (3) is a dye represented by the following formula (13):

formula (12)



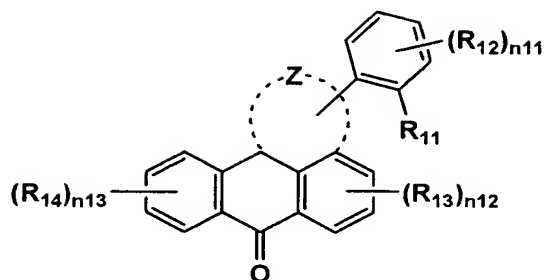
formula (13)



wherein R_{21} and R_{31} are independently a hydrogen bonding group; R_{22} , R_{23} , R_{24} , R_{28} , R_{32} , R_{33} , R_{34} , R_{35} and R_{39} are independently a hydrogen atom or a substituent; n_{21} , n_{23} , n_{24} , n_{31} , n_{33} , and n_{34} are each an integer of 1 to 4; n_{25} and n_{35} is an integer of 1 or 2.

6. An ink for ink jet printing comprising a dye represented by the following formula (1):

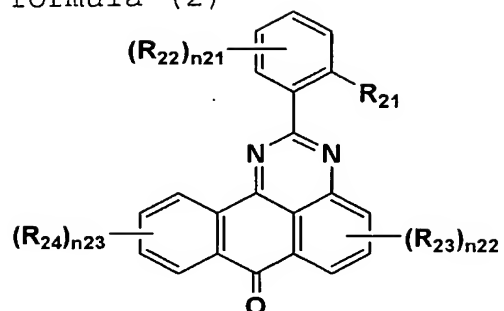
formula (1)



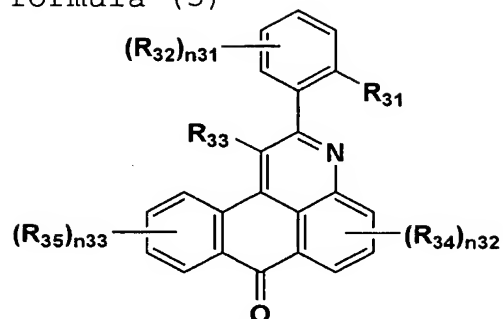
wherein Z is an atomic group necessary to form a 6-membered nitrogen containing aromatic ring; R_{11} is a hydrogen bonding group; R_{12} , R_{13} and R_{14} are independently a hydrogen atom or a substituent; $n11$ and $n13$ are each an integer of 1 to 4; $n12$ is an integer of 1 to 3.

7. The ink of claim 6, wherein the dye represented by formula (1) is a dye represented by the following formula (2), (3), (4), (5), (6) or (7):

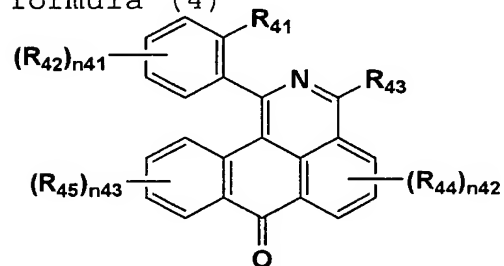
formula (2)



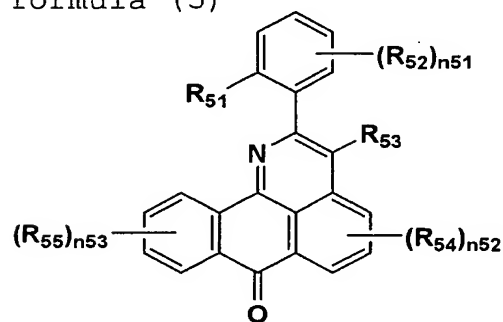
formula (3)



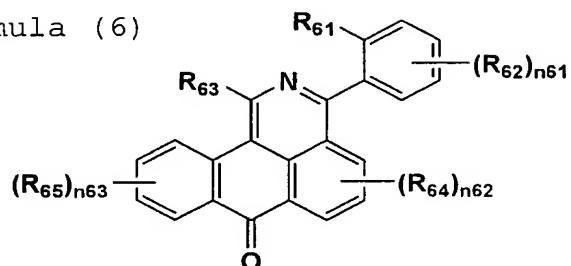
formula (4)



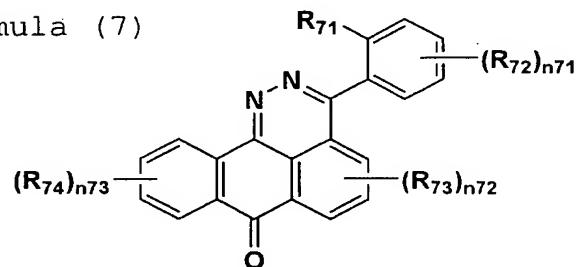
formula (5)



formula (6)



formula (7)



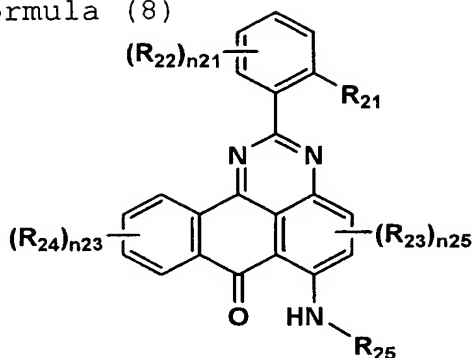
wherein R_{21} , R_{31} , R_{41} , R_{51} , R_{61} and R_{71} are each a hydrogen bonding atom; R_{22} , R_{23} , R_{24} , R_{32} , R_{33} , R_{34} , R_{35} , R_{42} , R_{43} , R_{44} , R_{45} ,

R_{52} , R_{53} , R_{54} , R_{55} , R_{62} , R_{63} , R_{64} , R_{65} , R_{72} , R_{73} , and R_{74} are independently a hydrogen atom or a substituent; n_{21} , n_{23} , n_{31} , n_{33} , n_{41} , n_{43} , n_{51} , n_{53} , n_{61} , n_{63} , n_{71} and n_{73} are each an integer of 1 to 4; n_{22} , n_{32} , n_{42} , n_{52} , n_{62} and n_{72} are each an integer of 1 to 3.

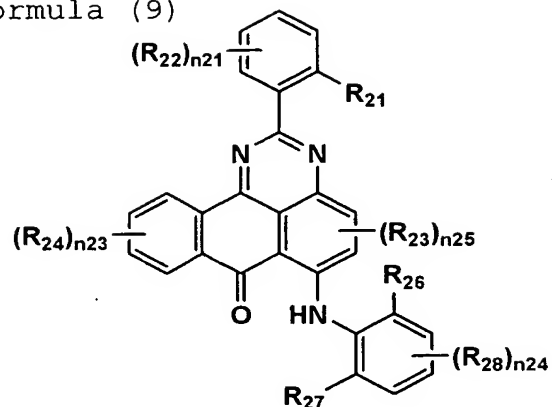
8. The ink of claim 7, wherein the dye represented by formula (1) is a dye represented by formula (2) or (3).

9. The ink of claim 8, wherein the dye represented by formula (2) is a dye represented by the following formulas (8) or (9), and the dye represented by formula (3) is a dye represented by the following formulas (10) or (11):

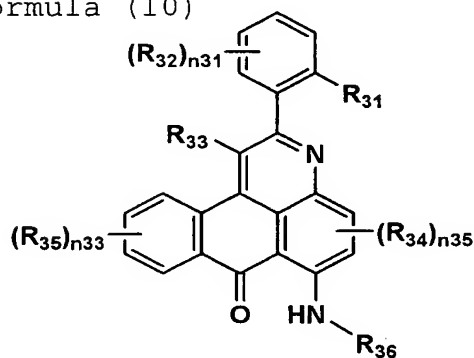
formula (8)



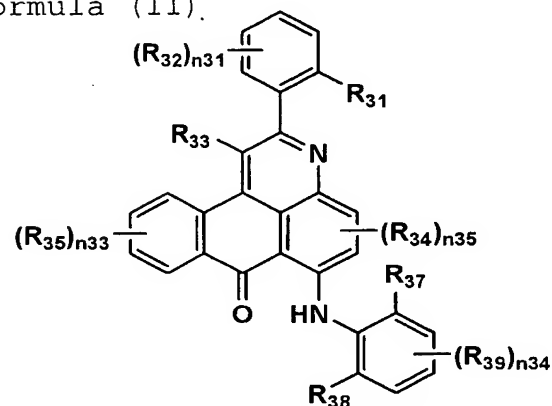
formula (9)



formula (10)



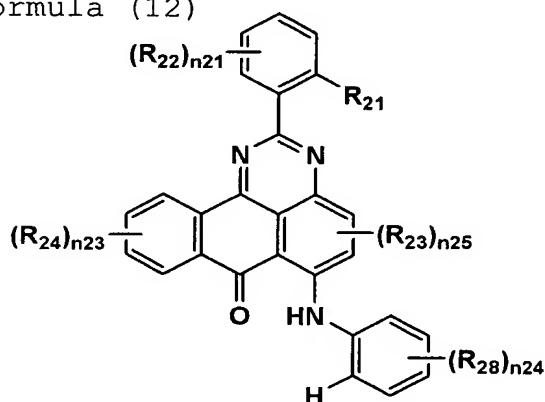
formula (11)



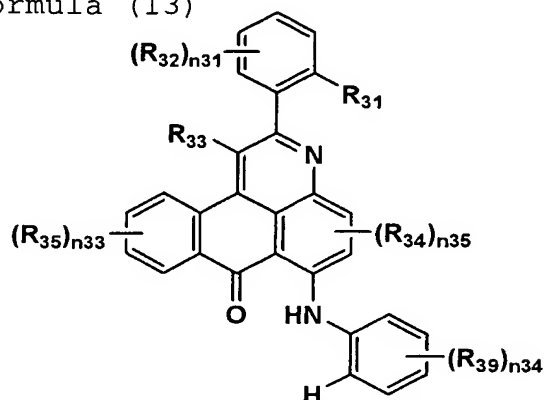
wherein R₂₁ and R₃₁ are independently a hydrogen bonding group; R₂₂, R₂₃, R₂₄, R₂₈, R₃₂, R₃₃, R₃₄, R₃₅ and R₃₉ are independently a hydrogen atom or a substituent; R₂₆, R₂₇, R₃₇ and R₃₈ are independently a substituent; n₂₁, n₂₃, n₃₁, and n₃₃ are each an integer of 1 to 4; n₂₄ and n₃₄ are each an integer of 1 to 3; n₂₅ and n₃₅ are each an integer of 1 or 2; R₂₅ and R₃₆ are independently a group having a Hammett substituent constant (σ_p) of 0.3 to 1.0.

10. The ink of claim 8, wherein the dye represented by formula (2) is a dye represented by the following formula (12), and the dye represented by formula (3) is a dye represented by the following formula (13):

formula (12)



formula (13)



wherein R_{21} and R_{31} are independently a hydrogen bonding group; R_{22} , R_{23} , R_{24} , R_{28} , R_{32} , R_{33} , R_{34} , R_{35} and R_{39} are independently a hydrogen atom or a substituent; $n21$, $n23$, $n24$, $n31$, $n33$, and $n34$ are each an integer of 1 to 4; $n25$ and $n35$ is an integer of 1 or 2.

11. The ink of claim 6, wherein in the compound represented by formula (1), the molecule contains at least one sulfonic acid group or at least one carboxyl group.

12. The ink of claim 6, wherein the ink comprises the dye in the form of fine particle dispersion.

13. The ink of claim 6, wherein the ink comprises the dye together with an oil-soluble polymer in the form of fine particle dispersion.